

$\Lambda_b(6146)^0$

$J^P = \frac{3}{2}^+$ Status: ***

Quantum numbers are based on quark model expectations.

$\Lambda_b(6146)^0$ MASS

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VALUE (MeV) DOCUMENT ID TECN COMMENT

6146.2 ±0.4 OUR AVERAGE

6146.5 ±2.1 ±0.2

6146.17±0.33±0.27

¹ SIRUNYAN 20K CMS $p\bar{p}$ at 13 TeV
² AAIJ 19AJ LHCb $p\bar{p}$ at 7, 8, 13 TeV

¹ SIRUNYAN 20K measures $m(\Lambda_b(6146)^0) - m(\Lambda_b^0) = 526.9 \pm 1.9 \pm 0.8$ MeV. We have adjusted the measurement to our best value of $m(\Lambda_b^0) = 5619.60 \pm 0.17$ MeV. Our first error is their experiment's error and our second error is the systematic error from using our best values.

² Observed in $\Lambda_b^0 \pi^+ \pi^-$ mode.

$m_{\Lambda_b(6146)^0} - m_{\Lambda_b^0}$

VALUE (MeV)

526.55±0.33±0.10

DOCUMENT ID TECN COMMENT

¹ AAIJ 19AJ LHCb $p\bar{p}$ at 7, 8, 13 TeV

¹ Observed in $\Lambda_b^0 \pi^+ \pi^-$ mode.

$\Lambda_b(6146)^0$ WIDTH

VALUE (MeV)

2.9±1.3±0.3

DOCUMENT ID TECN COMMENT

¹ AAIJ 19AJ LHCb $p\bar{p}$ at 7, 8, 13 TeV

¹ Observed in $\Lambda_b^0 \pi^+ \pi^-$ mode.

$\Lambda_b(6146)^0$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \Lambda_b^0 \pi^+ \pi^-$	seen

$\Lambda_b(6146)^0$ BRANCHING RATIOS

$\Gamma(\Lambda_b^0 \pi^+ \pi^-)/\Gamma_{\text{total}}$

VALUE

seen

seen

DOCUMENT ID TECN COMMENT

SIRUNYAN 20K LHCb $p\bar{p}$ at 13 TeV

AAIJ 19AJ LHCb $p\bar{p}$ at 7, 8, 13 TeV

Γ_1/Γ

NODE=B187

NODE=B187

NODE=B187205

NODE=B187M

NODE=B187M

NODE=B187M;LINKAGE=B

NODE=B187M;LINKAGE=A

NODE=B187A00

NODE=B187A00

NODE=B187A00;LINKAGE=A

NODE=B187W

NODE=B187W

NODE=B187W;LINKAGE=A

NODE=B187215;NODE=B187

DESIG=1

NODE=B187220

NODE=B187R01

NODE=B187R01

NODE=B187

REFID=60392

REFID=60061

$\Lambda_b(6146)^0$ REFERENCES

SIRUNYAN

20K PL B803 135345

A.M. Sirunyan *et al.*

(CMS Collab.)

AAIJ

19AJ PRL 123 152001

R. Aaij *et al.*

(LHCb Collab.)